

Using the Huawei E1691 Internet stick in Ubuntu



Huawei E1691 Internet stick

This device is currently used by these access providers:

Mobilicity (Canada)
Wind Mobile (Canada)
T-Mobile (USA)

Users of similar devices with Ubuntu or other GNU/Linux distributions may also benefit from this guide.

(Examples use Wind Mobile, but are not meant to be exclusive.)

Preparing your computer

- Turn off your wifi. You won't need it.
- Make sure you have a free USB port directly connected to the computer.
- Connect your computer to AC power or a battery with abundant charge
- Ensure that you have access to a user account with administrator privileges, or an account able to use an existing connection

The First Time

! Creating a new connection requires an administrator account.

Non-administrators can be given the ability to use an existing connection during the configuration process.



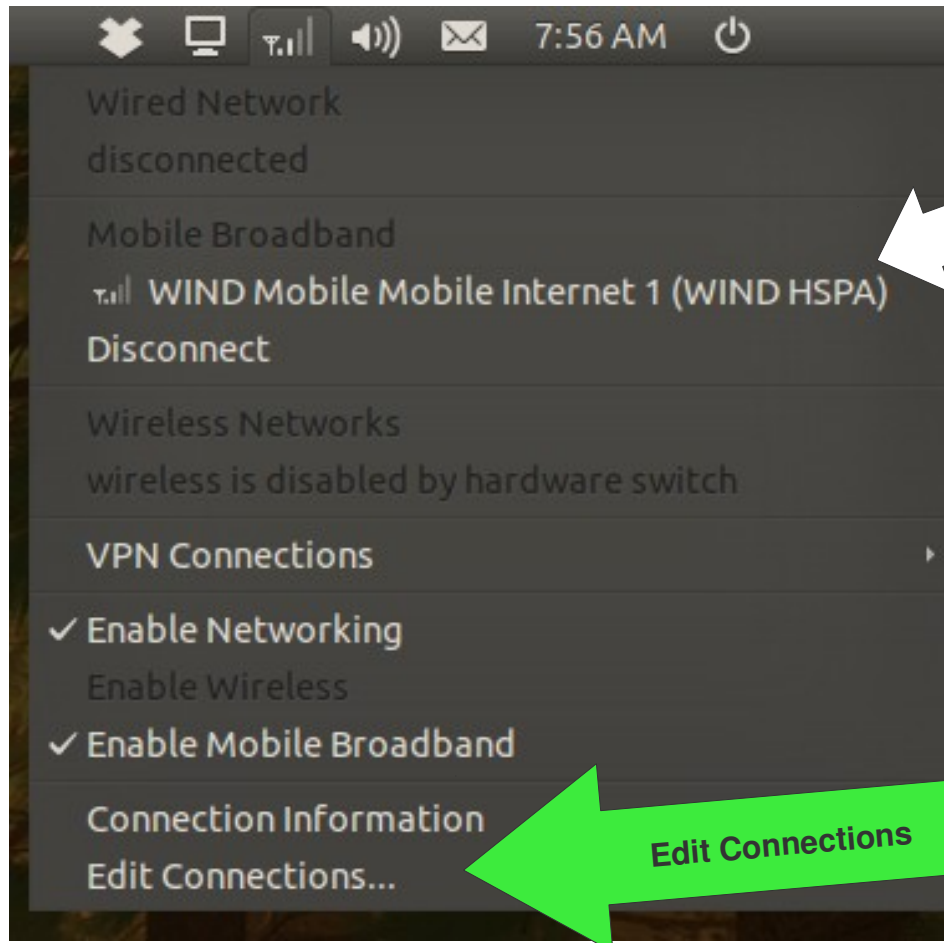
Detecting the device

1. Insert the Huawei Internet stick into the USB port
2. Wait until it is detected by the operating system. This may take as much as a minute.



GNOME network connection activity indicator in top panel

Opening the new connection tool



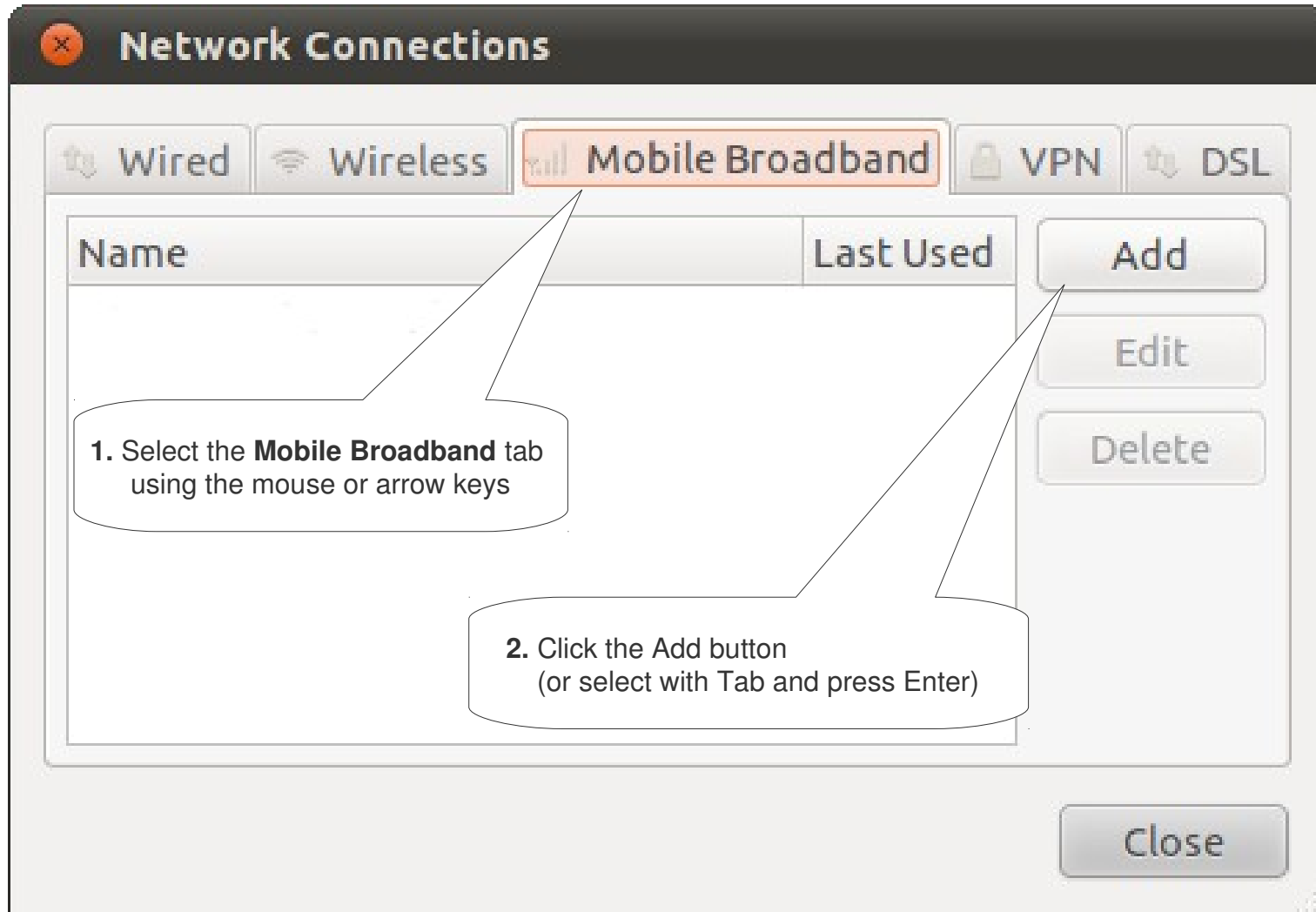
* Pre-existing connection will not appear during your first connection attempt.

Keyboard Shortcut: Alt+F2 and run
“nm-connection-editor”
or

1. Click on the network connection icon in the top panel
2. Select the **Edit Connections...** link in the network menu

* Network Connections is also under System > Preferences

Network Connections



New Mobile Broadband Connection

The screenshot shows a window titled "New Mobile Broadband Connection" with a close button in the top-left corner. The main heading is "Set up a Mobile Broadband Connection" in white text on an orange background. Below this, the text reads: "This assistant helps you easily set up a mobile broadband connection to a cellular (3G) network." followed by "You will need the following information:" and a bulleted list: "• Your broadband provider's name", "• Your broadband billing plan name", and "• (in some cases) Your broadband billing plan APN (Access Point Name)". Below the list, it says "Create a connection for this mobile broadband device:" followed by a dropdown menu showing "HUAWEI Technology HUAWEI Mobile". At the bottom right are "Cancel" and "Forward" buttons. Three callout boxes provide additional information: one on the left points to the list of required information, one at the bottom points to the device list, and one on the right explains the "Forward" button and the "Cancel" option.

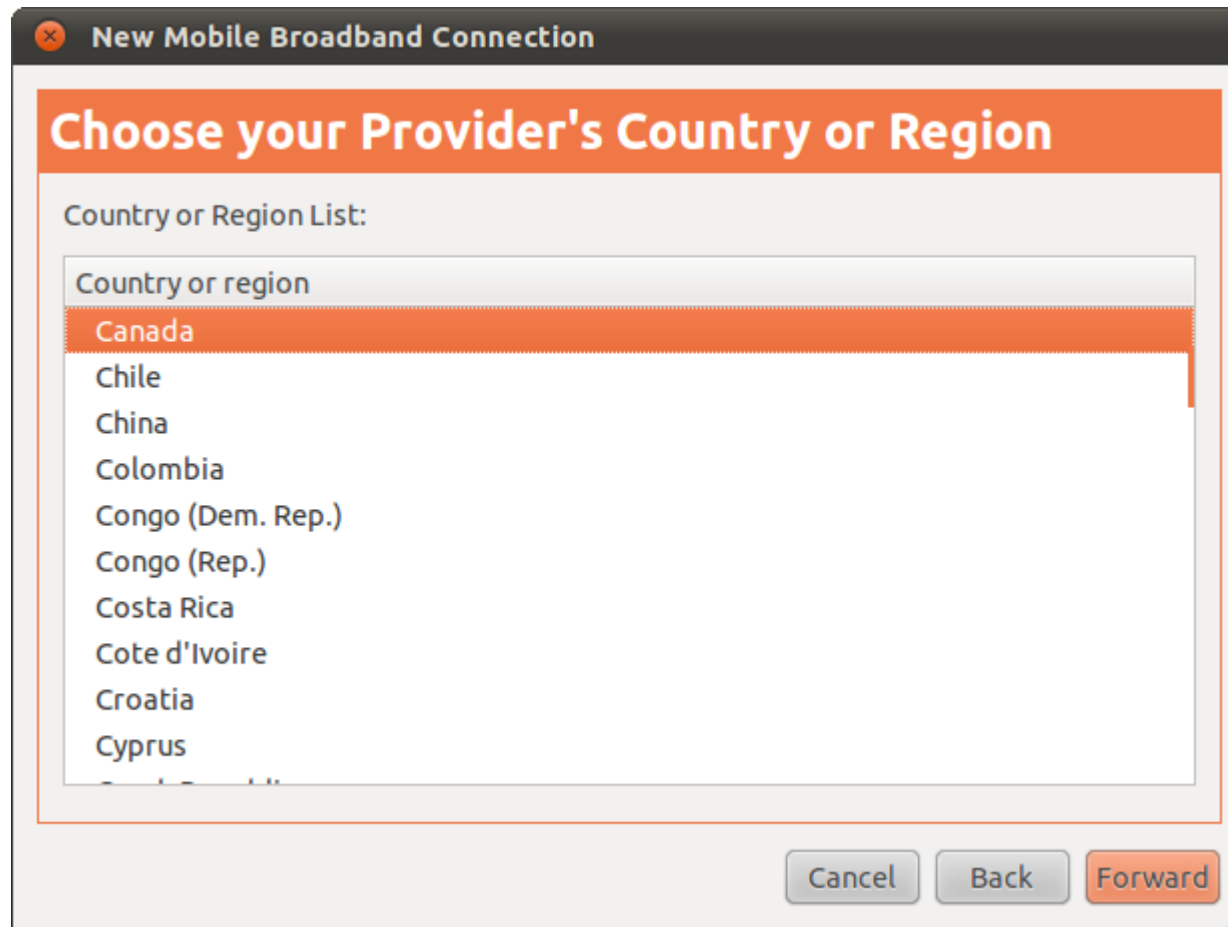
List of information that you will need

Select your device from the list and click the **Forward** button (or use the tab, arrow and Enter keys)

If your device is not listed choose the **Cancel** option.

List of detected devices from which to choose. If none are detected, this will be disabled.

Country & Region



Choose your provider

New Mobile Broadband Connection

Choose your Provider

Select your provider from a list:

Provider

- Bell Mobility
- Fido
- Mobilicity
- Rogers
- Telus Mobility
- Vidéotron
- WIND Mobile

I can't find my provider and I wish to enter it manually:

Provider:

Cancel Back Forward

If you cannot find your provider, use the Back button to check that your country was chosen correctly. If it was, try entering your provider's info directly using the "I can't find my provider..." field.

Billing Plan & APN

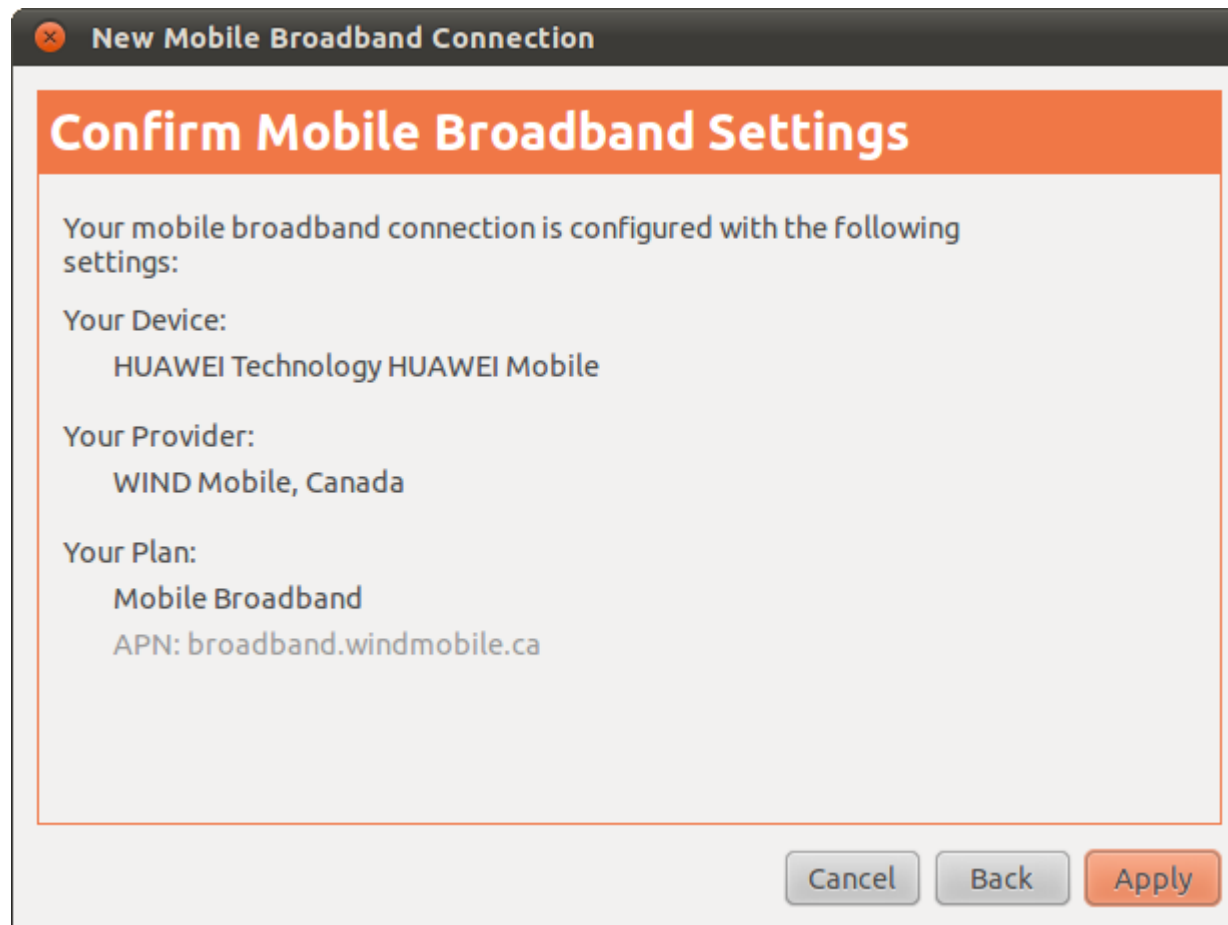
Selecting an incorrect plan may result in billing issues or may prevent connectivity.

The screenshot shows a configuration window with the following elements:

- Select your plan:** A dropdown menu with "Mobile Broadband" selected.
- Selected plan APN (Access Point Name):** A text input field containing "broadband.windmobile.ca".
- Warning:** A red exclamation mark icon followed by the text: "Warning: Selecting an incorrect plan may result in billing issues or may prevent connectivity." Below this is the instruction: "If you are unsure of your plan please ask your provider for your plan's APN."
- Buttons:** "Cancel", "Back", and "Forward" buttons at the bottom right.

If your APN is not entered for you, enter it yourself in the **Selected plan APN** text field. This should be done exactly as instructed by your provider.

Confirming settings



Using the mobile broadband connection on Ubuntu

Preparing the device

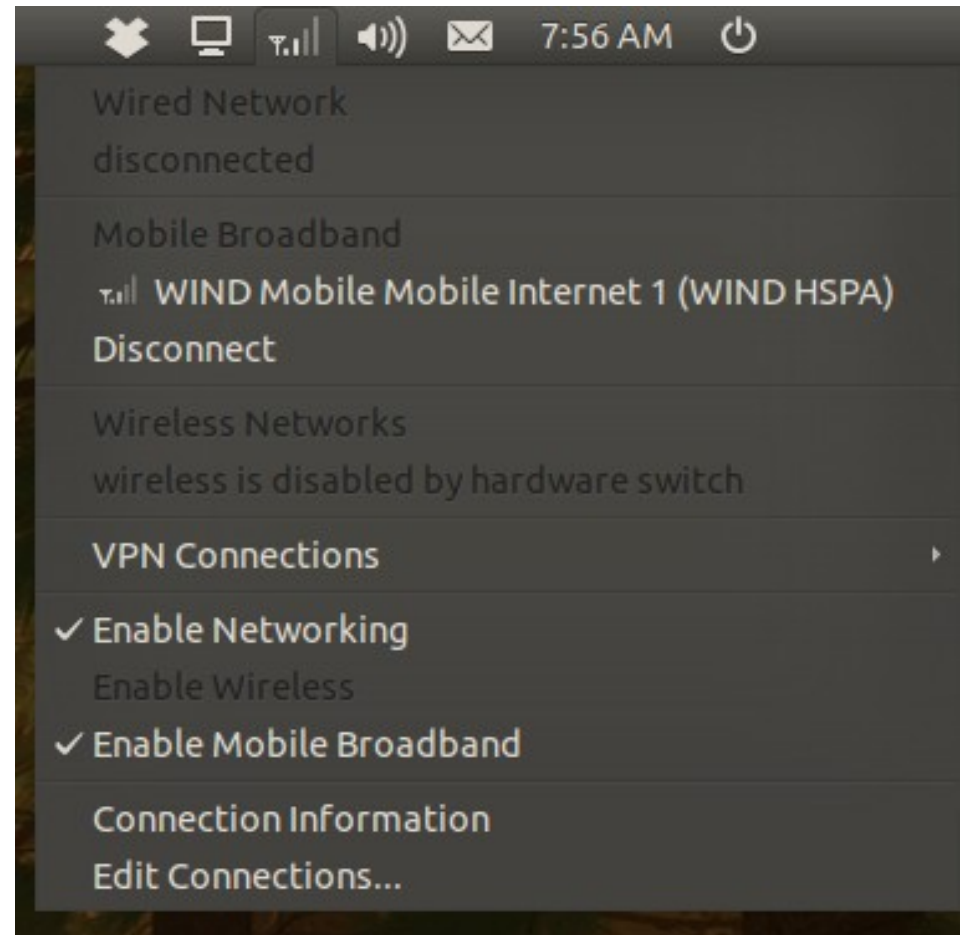
1. With the computer turned on and a user account with privileges active, insert the Internet stick device into a USB slot on the computer.
2. Wait for the Internet stick to be detected by the operating system and to activate. A blue light on the stick will flash briefly once or twice, then begin to shine steadily. The network manager icon in the top panel of your GNOME desktop environment will flash to indicate that the device is searching for a network to connect to.



Disconnecting

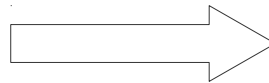
To disconnect the Internet stick without removing it from the USB slot, click on Disconnect in the network connection menu.

Removing the Internet stick from the USB slot will also close the connection.

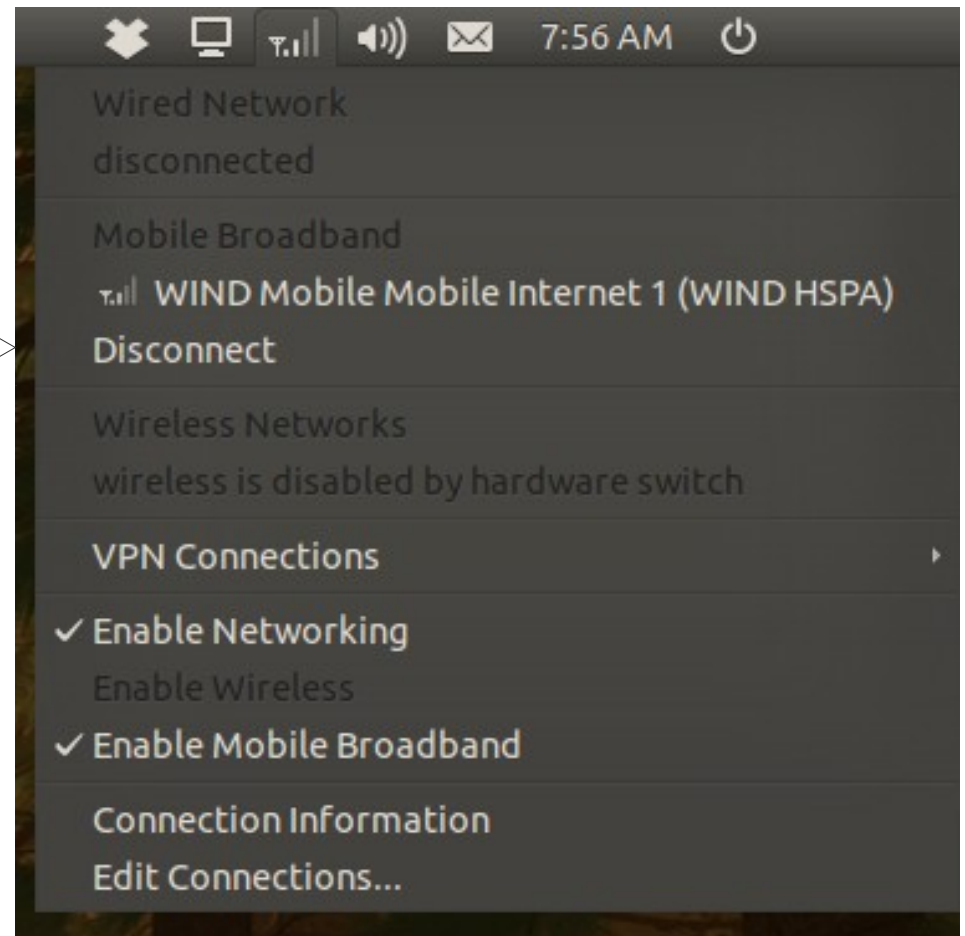


Reconnecting

To disconnect the Internet stick without removing it from the USB slot, click on Disconnect in the network connection menu.



Select the name of your connection in the same menu to attempt reconnection to the network.



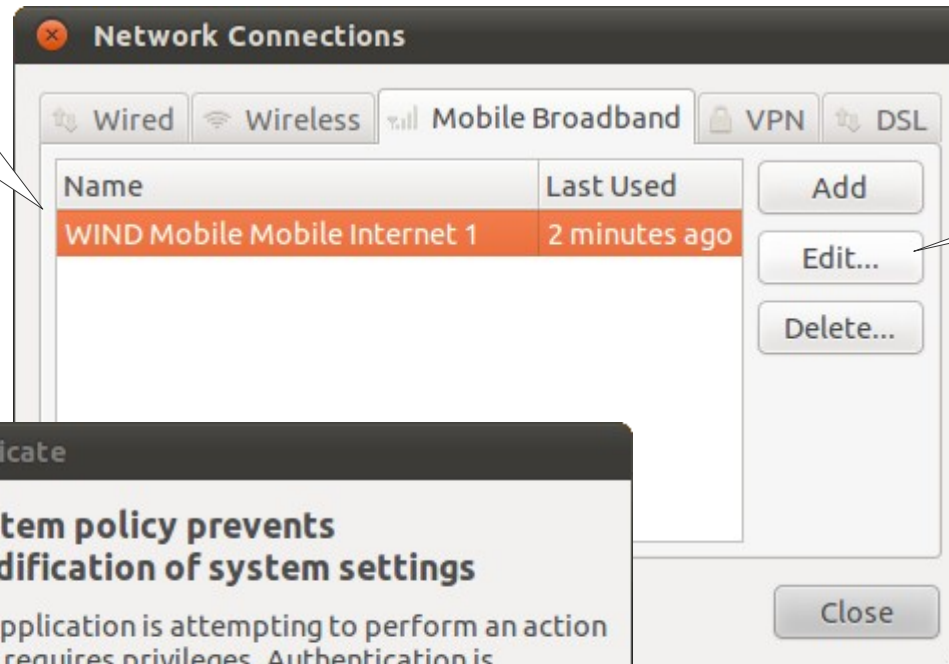
Settings that work

These settings were derived from a functioning Windows 7™ operating system on identical hardware.

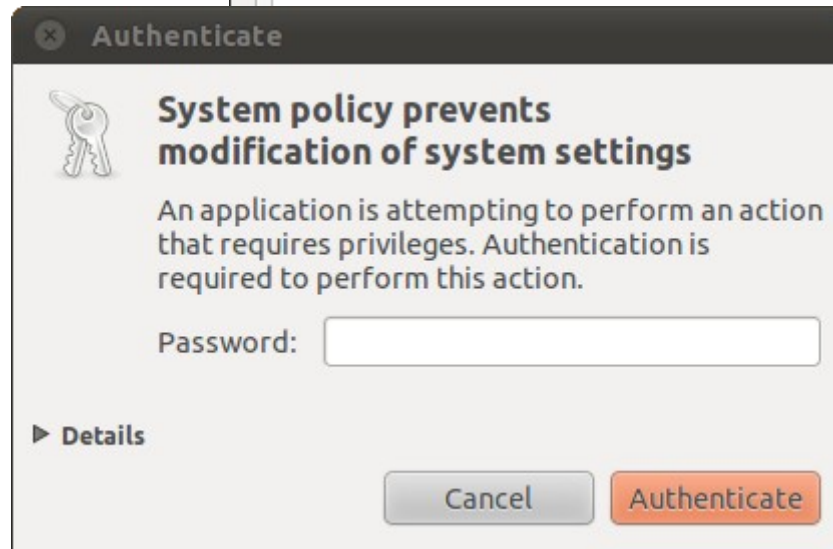
Settings are specific to the Huawei device indicated and the Windmobile network in Canada, as of September 2011.

Modifying connection settings

1. Choose connection to view or edit

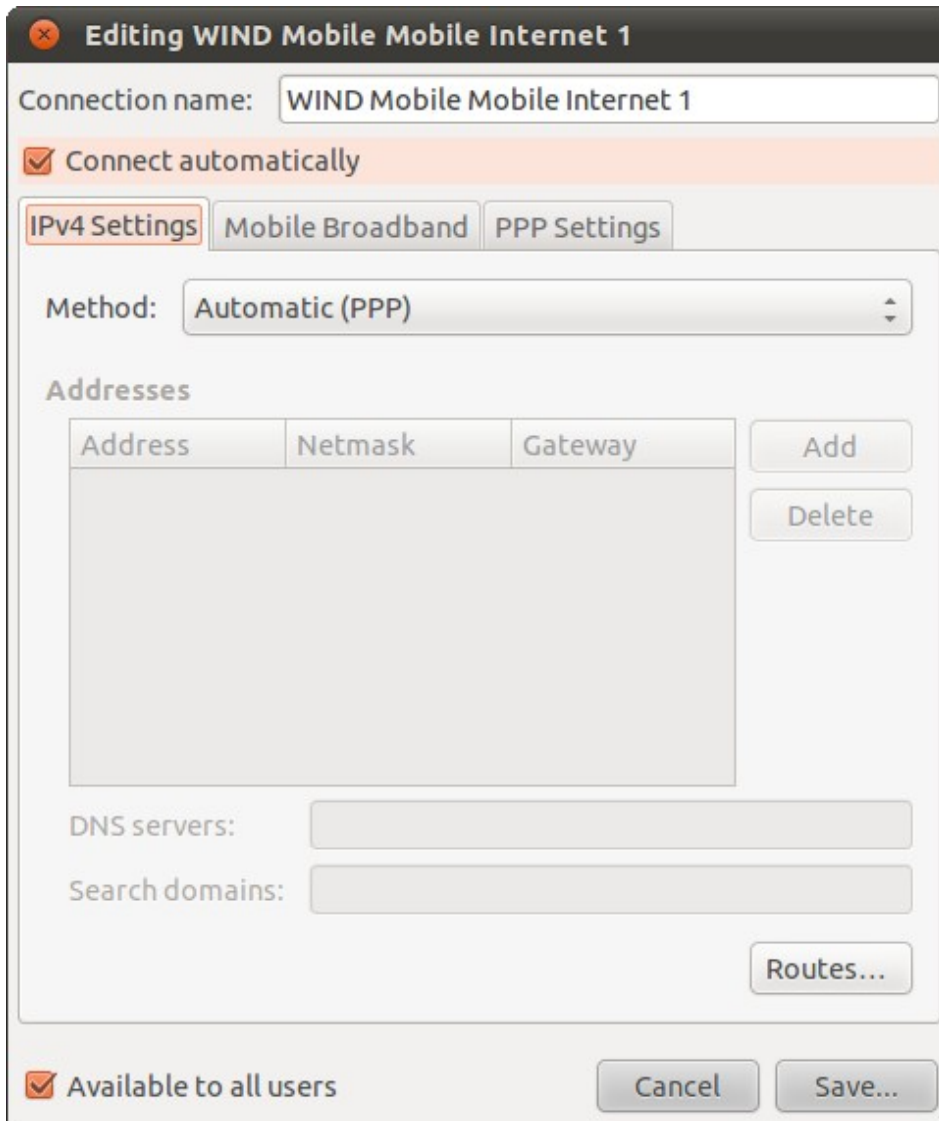


2. Click or activate the **Edit...** button



3. In most instances you will need to enter the password of a user with administrative privileges.

IPv4 settings tab



For Windmobile Broadband, the correct setting in **Method** is Automatic (PPP).

Routes should be blank.

Automatic connection is optional but makes regular use easy.

If you want non-administrators to use the connection, select the **Available to all users** checkbox.

Mobile broadband tab settings

Editing WIND Mobile Mobile Internet 1

Connection name: WIND Mobile Mobile Internet 1

Connect automatically

IPv4 Settings **Mobile Broadband** PPP Settings

Basic

Number: *99#

Username:

Password:

Advanced

APN: broadband.windmobile.ca Change...

Network ID:

Type: Any

Allow roaming if home network is not available

PIN:

Show passwords

Available to all users

Cancel Save...

Number: *99#

Access Point Name (APN)
"broadband.windmobile.ca"
(yours may differ)

Connect automatically: checked
Number: *99#
APN: broadband.windmobile.ca
Allow roaming...: checked (optional)
Available to all users: checked
(if you want non administrators
to use the connection)

PPP settings

In the Authentication section, **Allowed Methods** should be 'CHAP'.
To change the method(s), click or activate **Configure Methods...**

Editing WIND Mobile Mobile Internet 1

Connection name: WIND Mobile Mobile Internet 1

Connect automatically

IPv4 Settings Mobile Broadband **PPP Settings**

Authentication
Allowed methods: CHAP
Configure Methods...

Compression

- Use point-to-point encryption (MPPE)
- Require 128-bit encryption
- Use stateful MPPE
- Allow BSD data compression
- Allow Deflate data compression
- Use TCP header compression

Echo

- Send PPP echo packets

Available to all users

Cancel Save...

Selected check boxes:
Connect automatically (optional)
Allow RSD data compression
Allow Deflate data compression
Use TCP header compression
Available to all user (optional)

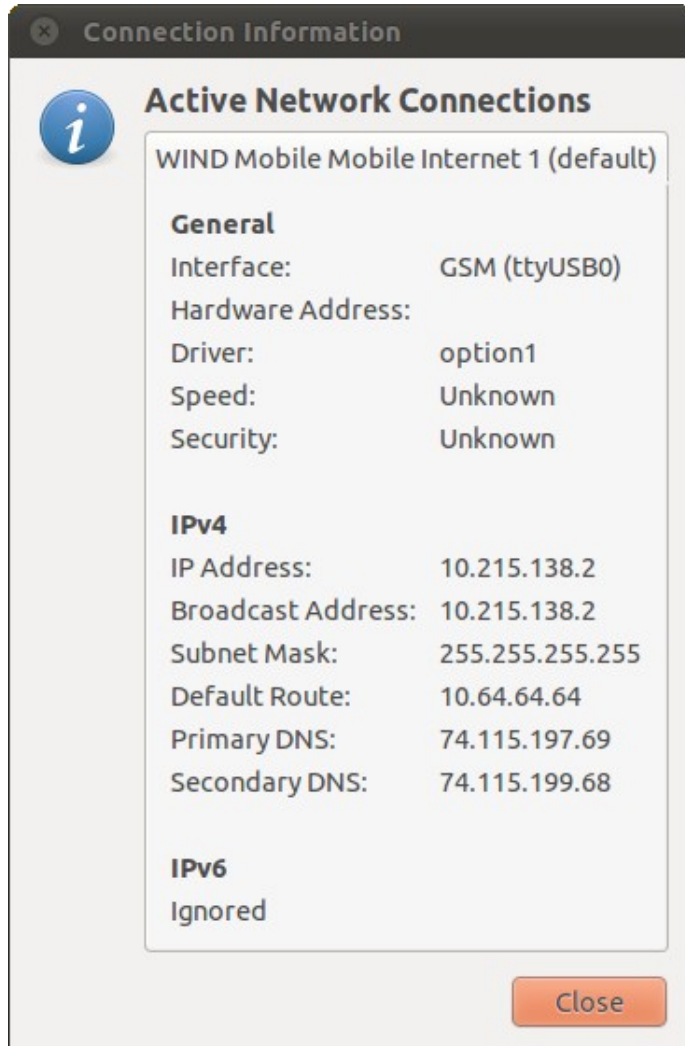
Editing PPP authentication methods



Selected authentication methods:
CHAP

Your settings may differ. Check with your mobile service provider for details.

Connection info



To learn about an active connection, click the network connection icon in the top panel to open the menu and select Connection Information, or use Network Tools in the System menu.

The interface will be shown as GSM and the USB device will be listed.

IPV4 addresses will also be displayed.

The view from the command line

Here is what the detection of the device looks like from the command line:

```
ralph@ralph-HP-620:~$ dmesg | tail
[39757.372396] usb 2-5: GSM modem (1-port) converter now attached to ttyUSB2
[39757.376219] scsi21 : usb-storage 2-5:1.5
[39757.387455] scsi22 : usb-storage 2-5:1.6
[39758.377619] scsi 21:0:0:0: CD-ROM          HUAWEI  Mass Storage    2.31 PQ: 0 ANSI: 2
[39758.382569] sr1: scsi-1 drive
[39758.382862] sr 21:0:0:0: Attached scsi CD-ROM sr1
[39758.385257] sr 21:0:0:0: Attached scsi generic sg2 type 5
[39758.392612] scsi 22:0:0:0: Direct-Access  HUAWEI  SD Storage    2.31 PQ: 0 ANSI: 2
[39758.396280] sd 22:0:0:0: Attached scsi generic sg3 type 0
[39758.407824] sd 22:0:0:0: [sdb] Attached SCSI removable disk
```

About the author



Ralph Pichie is a technical writer with experience in software development, post secondary education, hardware and public sector environments.

He has used Linux since early 2004.

Ralph currently lives in Edmonton, Alberta.

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